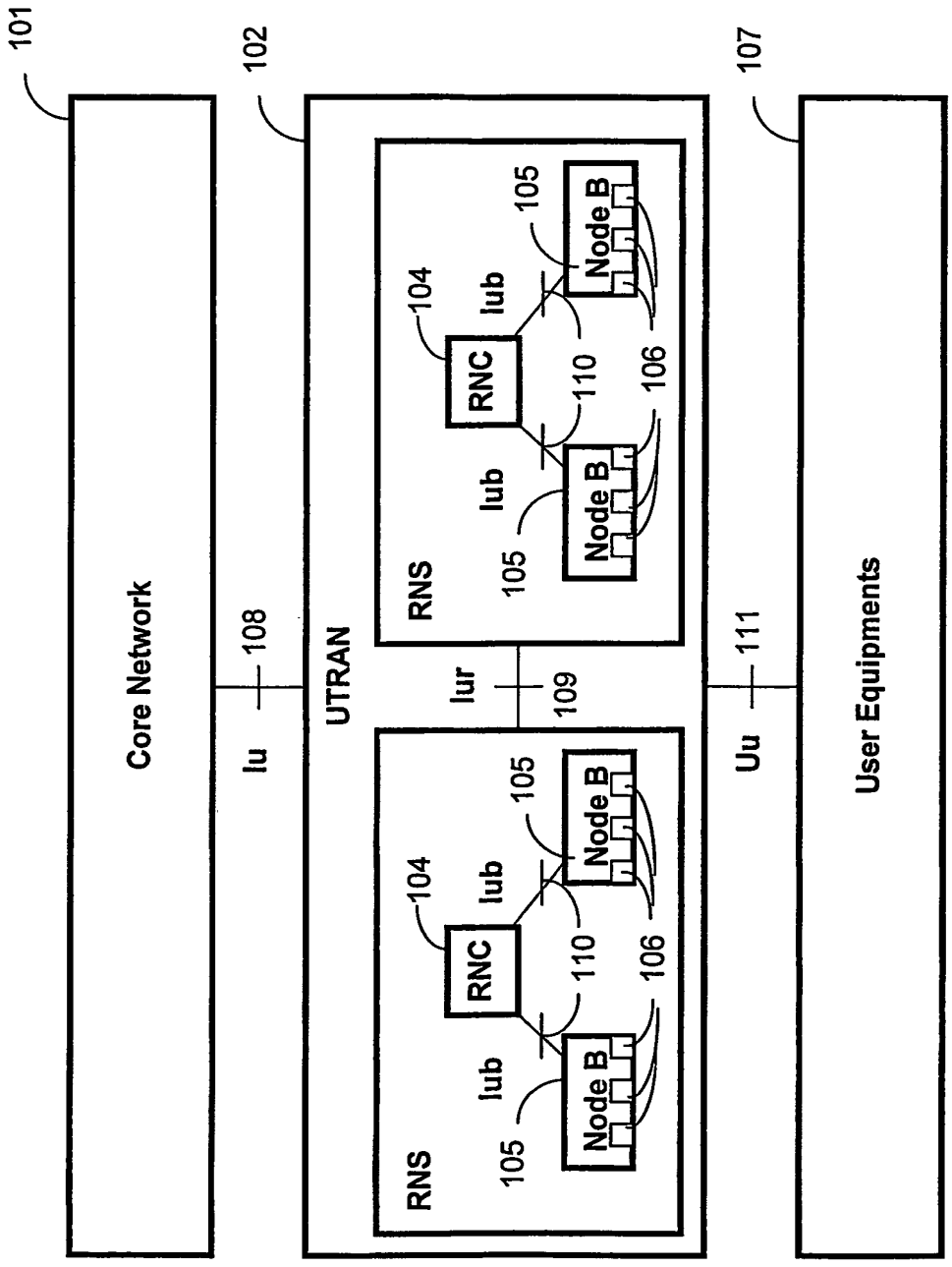

101
102
107
Core Network
UTRAN
User Equipments
Iu
108
Iur
109
Uu
111
RNS
RNC
Node B
Iub
104
105
106
110

Fig.1

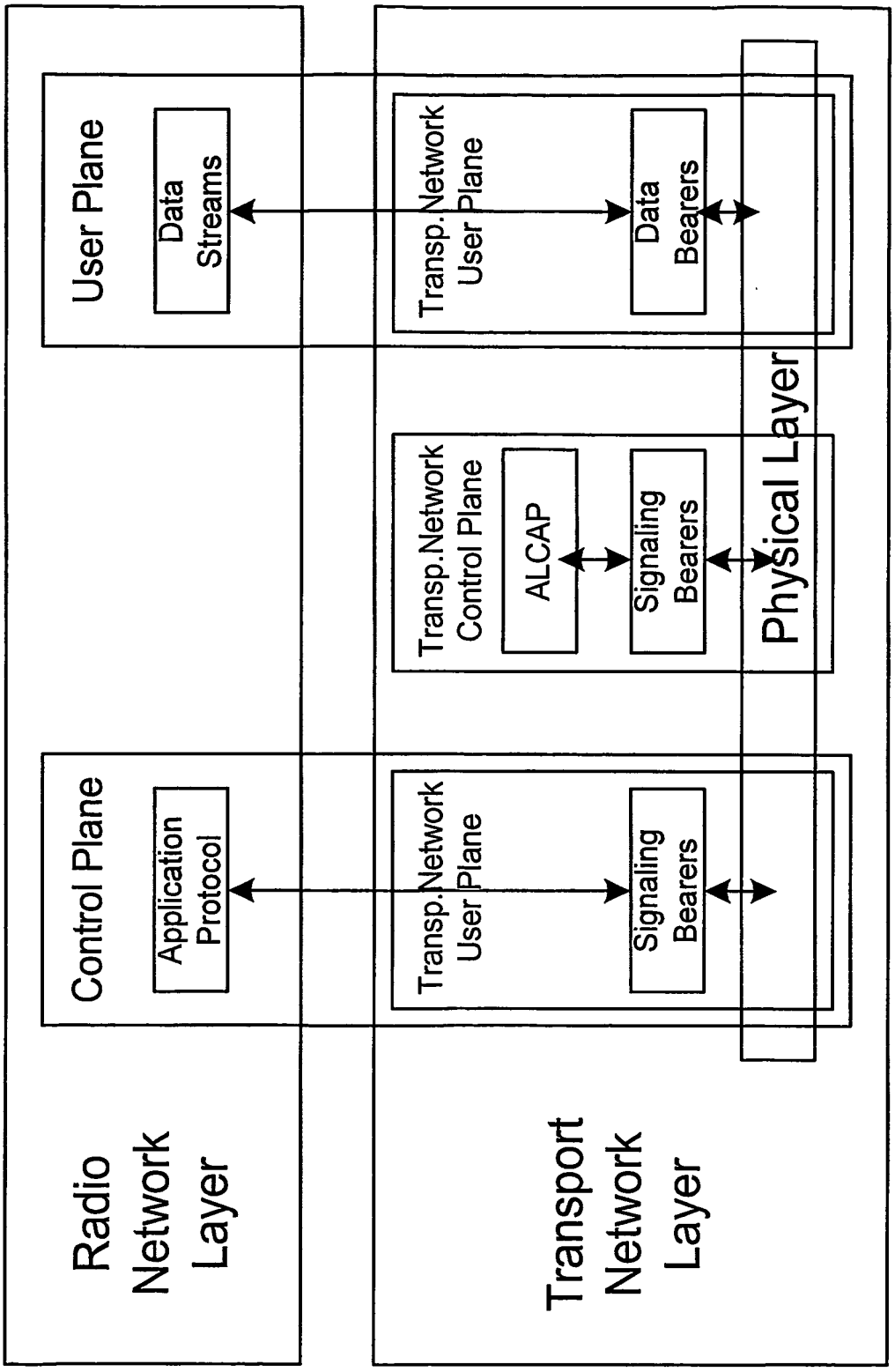

Radio Network Layer
Transport Network Layer
User Plane
Data Streams
Control Plane
Application Protocol
Transp.Network User Plane
Data Bearers
Transp.Network User Plane
Signaling Bearers
Transp.Network Control Plane
ALCAP
Signaling Bearers
Physical Layer

Figure 2a

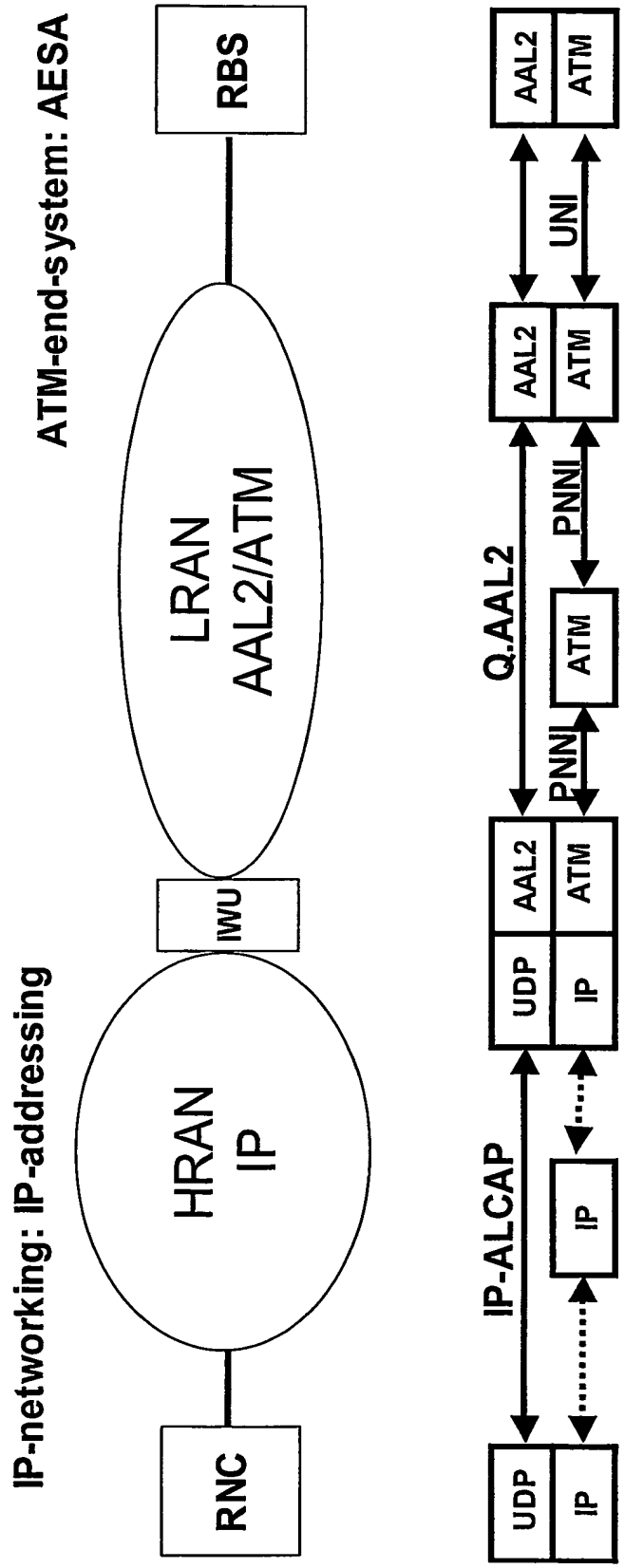

IP-networking: IP-addressing
ATM-end-system: AESA
RBS
LRAN
AAL2/ATM
IWU
HRAN
IP
RNC
UDP
IP
IP-ALCAP
IP
UDP
AAL2
ATM
Q.AAL2
PNNI
ATM
PNNI
AAL2
ATM
UNI
AAL2
ATM

Figure 2b

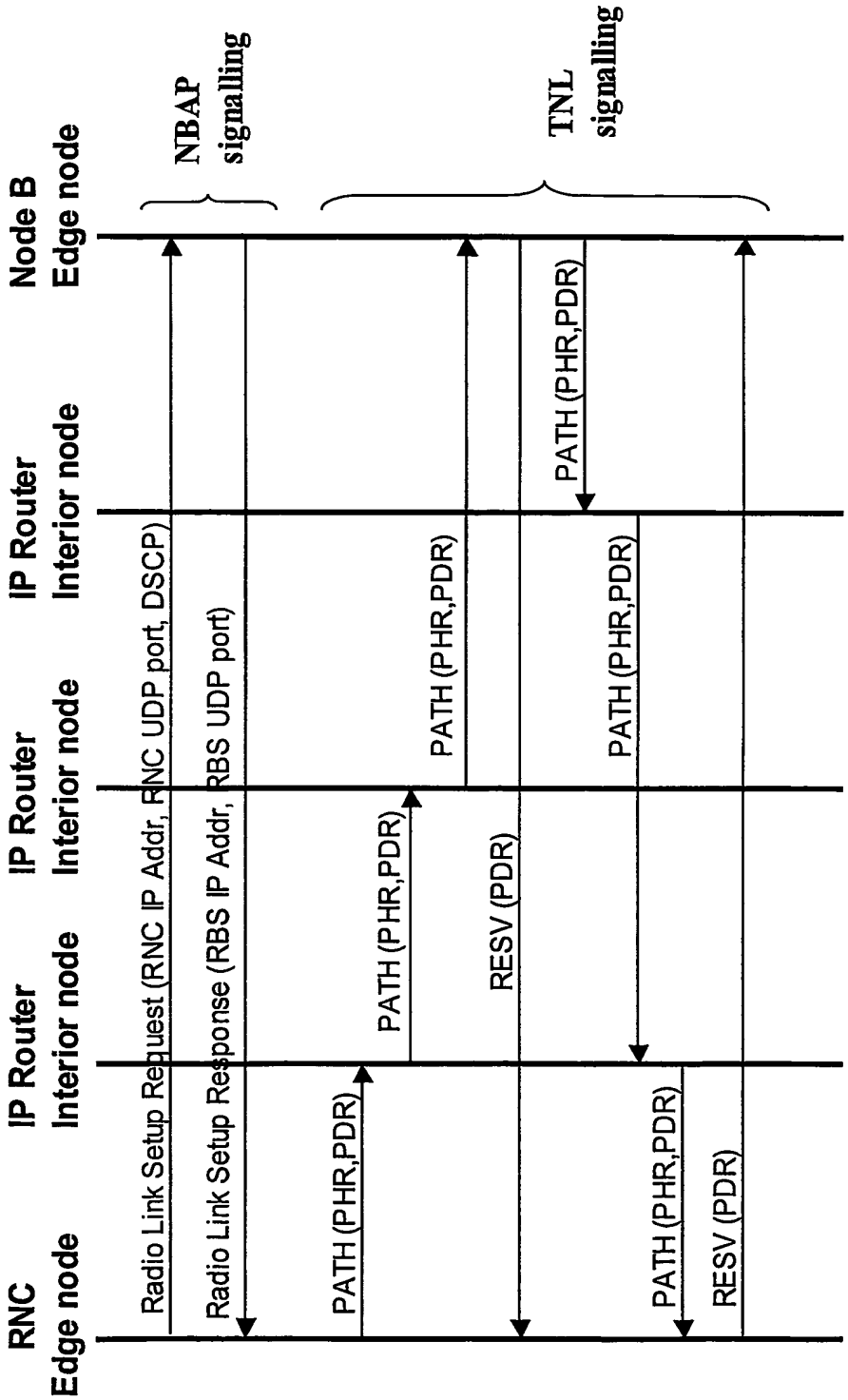

RNC Edge node
IP Router Interior node
IP Router Interior node
IP Router Interior node
Node B Edge node
NBAP signalling
TNL signalling
Radio Link Setup Request (RNC IP Addr, RNC UDP port, DSCP)
Radio Link Setup Response (RBS IP Addr, RBS UDP port)
PATH (PHR,PDR)
PATH (PHR,PDR)
RESV (PDR)
PATH (PHR,PDR)
PATH (PHR,PDR)
PATH (PHR,PDR)
RESV (PDR)

Figure 3a

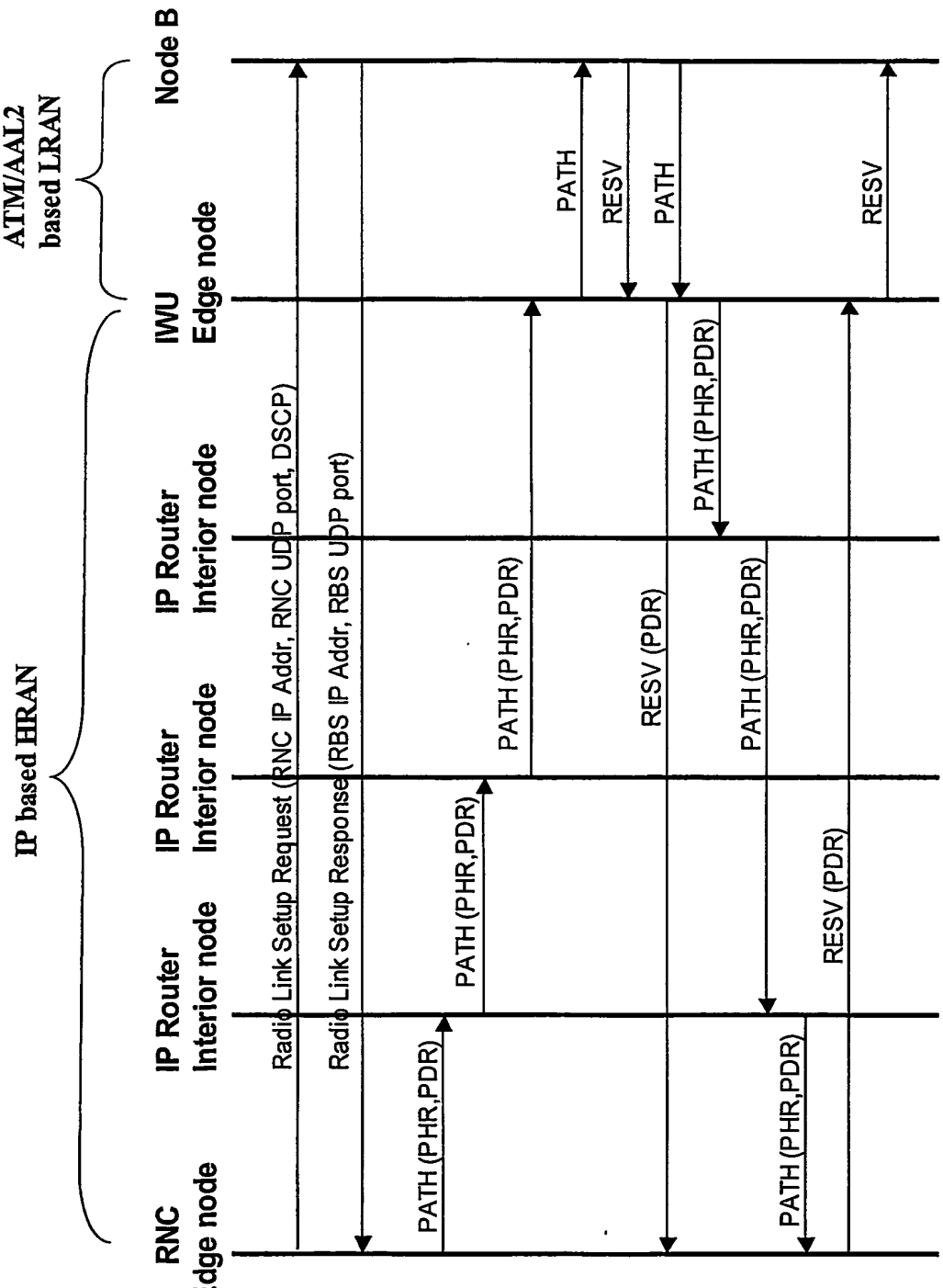

IP based HRAN
ATM/AAL2 based LRAN
RNC Edge node
IP Router Interior node
IP Router Interior node
IP Router Interior node
IWU Edge node
Node B
Radio Link Setup Request (RNC IP Addr, RNC UDP port, DSCP)
Radio Link Setup Response (RBS IP Addr, RBS UDP port)
PATH (PHR,PDR)
PATH (PHR,PDR)
PATH (PHR,PDR)
RESV (PDR)
PATH (PHR,PDR)
RESV (PDR)
PATH
RESV
PATH
RESV

Figure 3b

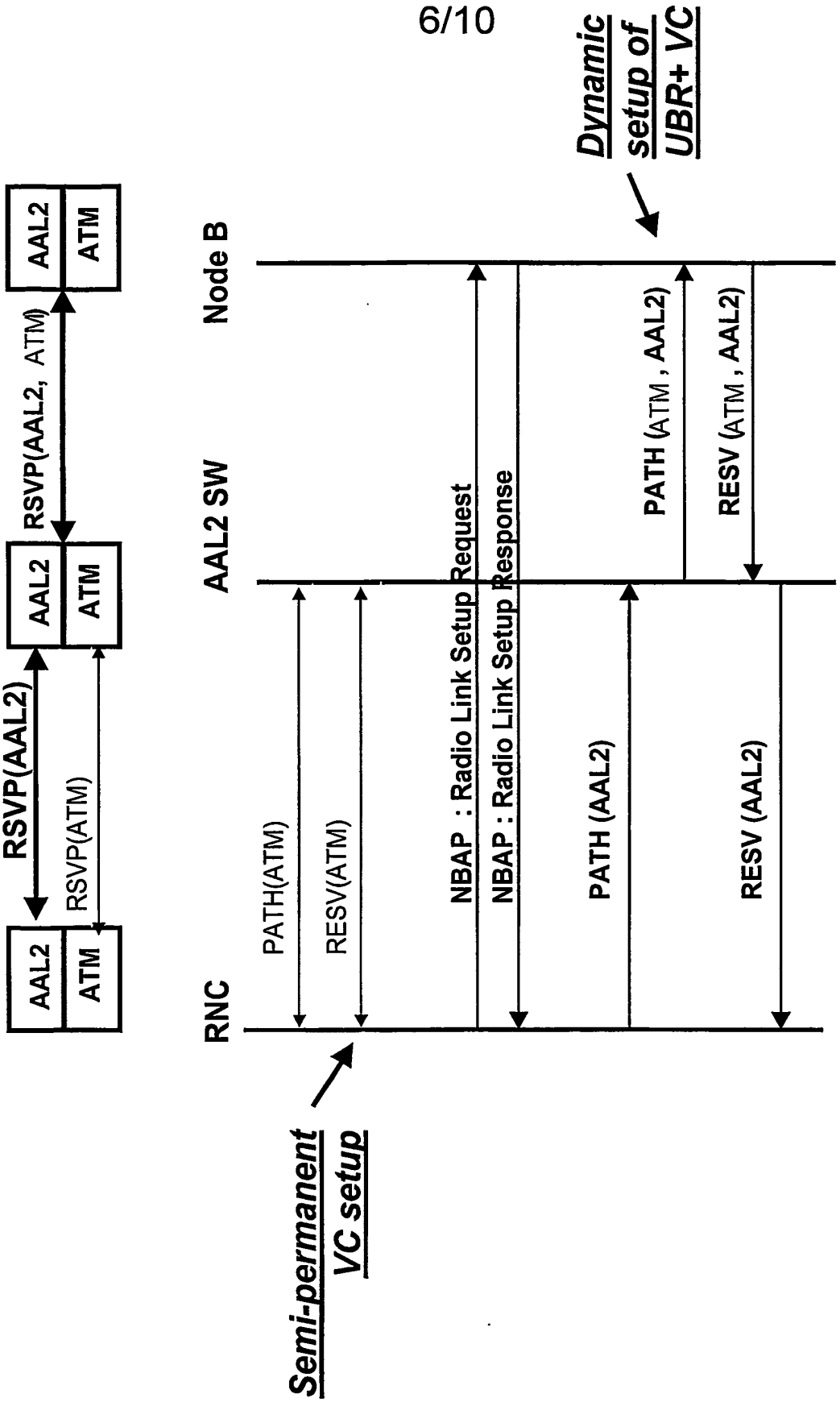

AAL2
ATM
RSVP(AAL2, ATM)
AAL2
ATM
RSVP(AAL2)
RSVP(ATM)
AAL2
ATM
RNC
AAL2 SW
Node B
Semi-permanent VC setup
Dynamic setup of UBR+ VC
PATH(ATM)
RESV(ATM)
NBAP : Radio Link Setup Request
NBAP : Radio Link Setup Response
PATH (AAL2)
RESV (AAL2)
PATH (ATM , AAL2)
RESV (ATM , AAL2)

Figure 4a

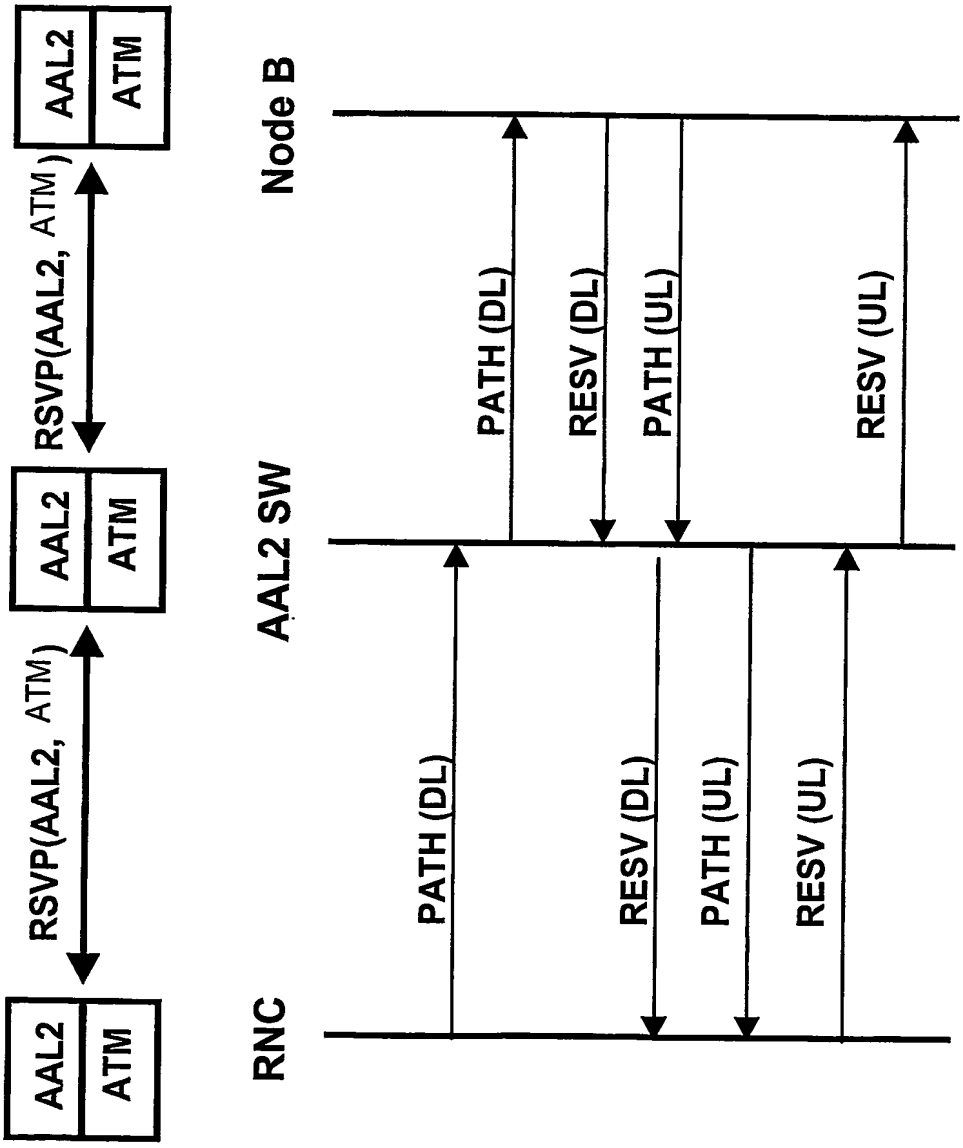

AAL2
ATM
RSVP(AAL2, ATM)
AAL2
ATM
RSVP(AAL2, ATM)
AAL2
ATM
RNC
AAL2 SW
Node B
PATH (DL)
RESV (DL)
PATH (UL)
RESV (UL)
PATH (DL)
RESV (DL)
PATH (UL)
RESV (UL)

Figure 4b

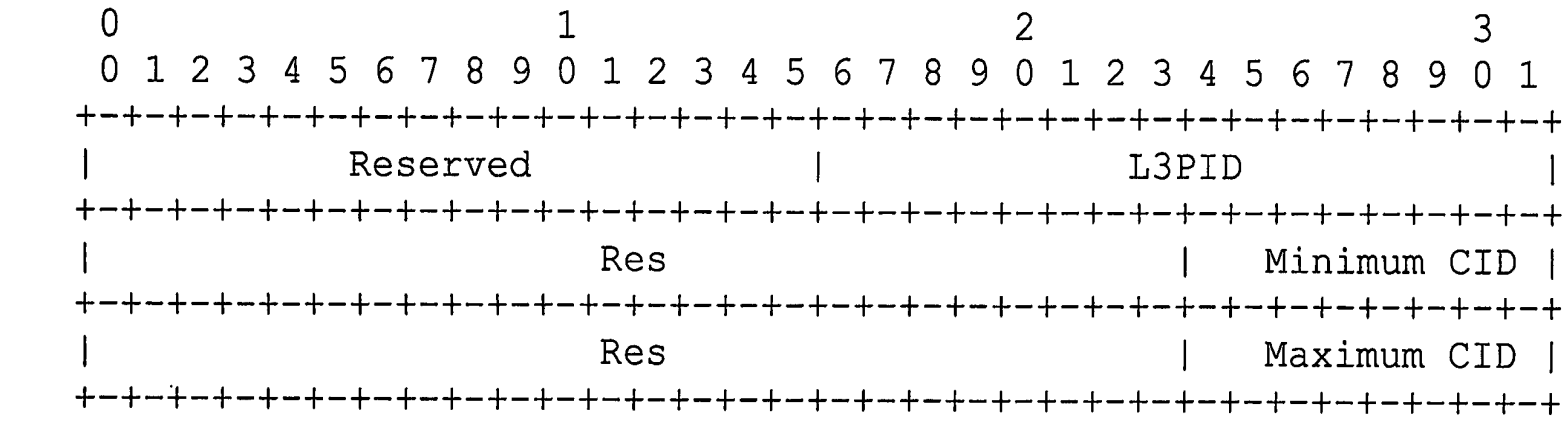
	PATH(DL)		RESV(DL)		PATH(UL)		RESV(UL)	
	writes	reads	writes	reads	writes	reads	writes	reads
RSVP_HOP	RNC, SW	SW, NodeB	NodeB, SW	SW, RNC	NodeB, SW	SW, RNC	RNC, SW	SW, NodeB
SESSION	RNC	SW, NodeB	NodeB	SW, RNC	NodeB	SW, RNC	RNC	SW, NodeB
SENDER_TEMPLATE	RNC	SW, NodeB	NodeB	SW, RNC	NodeB	SW, RNC	RNC	SW, NodeB
SENDER_TSPEC	RNC	NodeB	-	-	-	-	-	-
FLOW_SPEC	-	-	NodeB, SW	SW, RNC	-	-	RNC, SW	SW, NodeB
DCLASS	-	-	NodeB	SW, RNC	-	-	RNC	SW, NodeB
LABEL_REQUEST	RNC, SW	SW, NodeB	-	-	NodeB, SW	SW, RNC	-	-
AAL2_LABEL_REQUEST	RNC, SW	SW, NodeB	-	-	NodeB, SW	SW, RNC	-	-
LABEL	-	-	NodeB, SW	SW, RNC	-	-	RNC, SW	SW, NodeB
AAL2_LABEL	-	-	NodeB, SW	SW, RNC	-	-	RNC, SW	SW, NodeB

Table 1

Figure 5

Label Request with CID Range (new)

Class = 19, C_Type = ?



LABEL(CID) class = 16, C_Type = ? (new)

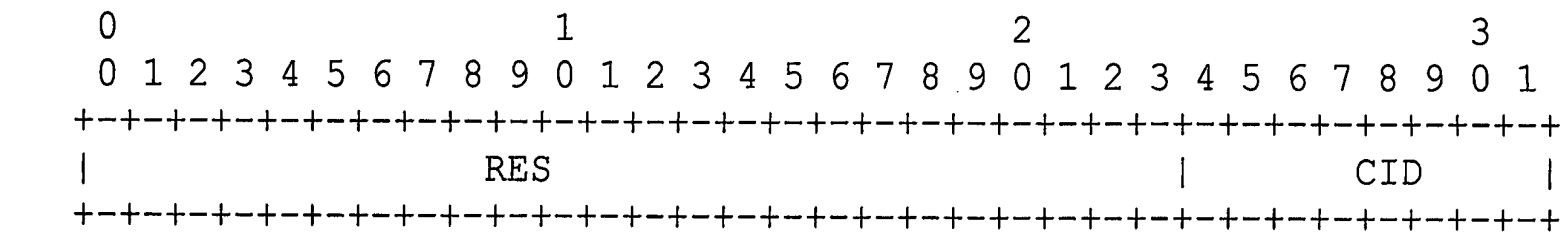


Figure 6

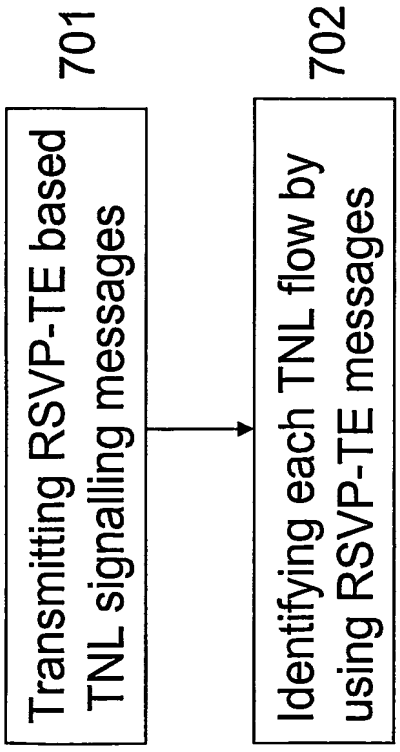

701
Transmitting RSVP-TE based TNL signalling messages
702
Identifying each TNL flow by using RSVP-TE messages

Fig. 7